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be *flavicans*, and as the remarks under this species both in the Lesquereux & James' Manual and in Sullivant's "Icones" are somewhat misleading, the following notes may be of interest:

The species grows in separate tufts, as well as mingled with *hygrometrica*, from which it may be distinguished by average smaller size, erect pedicel, more pointed leaves, and mouth less oblique, as well as less furrowed capsule, which matures a week or two earlier than in *hygrometrica*, in this region at least, where the best specimens were collected from the 1st to the 10th of June. When well ripened, the capsules are very dark reddish, with a low convex lid not apiculate. The mouth of *hygrometrica* measures about ten-fifteenths mm. across, of *flavicans* eight-fifteenths to nine-fifteenths mm., and of *F. microstoma* about one-half mm. The spores of the first measure up to about .018 mm., of the other two, up to about .025 mm. *F. flavicans* is essentially a southern species, Austin only, I believe, having collected it a little farther north than this, near Closter, N. J.—*R. S. Williams, New York Botanical Garden.*

GRIMMIA MANNIAE AND GRIMMIA HOLZINGERI.

By Prof. J. M. Holzinger.

"Grimmia Holzingeri Card. & Ther. sp. nov.—Very small, slender, in small cushions, dull green, fuscous below. Stems erect, 4–6 mm. high, sparingly branched, branches sometimes attenuate, subflagellate. Leaves crowded, very small, 0.50–0.70 mm. long, 020–0.35 mm. broad, erect when moist, appressed when dry, shortly ovate-oblong, concave, all obtusely acuminate, margins plane, entire; costa channeled, reaching the apex, 0.028 mm. broad at base, upper cells bistratose, quadrate-subrotund, the lower cells larger, unistratose, yellow, the lowest oblong or sublinear, all incrassate. Other parts unknown.

"This very minute species, resembling in habit the small forms of *Andreaea petrophila*, is quite distinct from all the European and North American species of *Grimmia* with muticous leaves by the small size, and the shape and areolation of the leaves.—Base of Sperry glacier, Mt. Trilby." Bot. Gaz **30**:124. 1900.

Grimmia Manniae C. Muell. in Flora, **70**:223, 224. 1887.

"Grimmia (Eugrimmia) Manniae n. sp.; dioecious; in delicate crowded intensely green cushions; the fastigiately branched stems very slender, densely leafy, loosely cohering and obtuse at apex: stem leaves closely imbricated, small, from a broad truncate base extended into an open deeply keeled lamina which is obtusely short-acuminate, their erect margins very entire, slender costa green, excurrent to percurrent, small basal cells greenish but empty, hexagonal, somewhat thick walled, the upper cells minute and indistinct; perichaetial leaves densely imbricated, several, larger, more obtuse, areolation larger, more involute (i, e. rolled up); all leaves somewhat succulent; capsule erect, rather large, globe- to urn-shaped, its walls coriaceous, pachydermous, red, raised on a reddish slender slightly spirally twisted seta, which is rather long exserted considering the small size of the plant; the conic operculum a very little oblique; teeth short, red; more or less split lengthwise and frequently perforated.

"Type station: California, Napa Co., Napa Springs. Coll. Mrs. Martha Mann, May 2, 1886.

"By the character of its crowded sods and of its stems this species approaches somewhat *Grimmia plagiopodia*; but by its delicate beautiful capsules on short pedicels it stands quite apart, a most elegant species.

"A beautiful *Grimmia*, distinguished at the first glance. Its stems remind of a *Zygodon* of the cut of *Z. Fosteri* rather than of a *Grimmia*. And its fruits possess a Bryum-like appearance of the type of *Doliolidium*, only in diminutive form."

Dr. Kindberg has suggested that *Grimmia Holzingeri* Card. & Ther., is *Grimmia Manniae*. This calls attention, first of all, to the latter species, which seems not to have been collected since 1886. The above is a translation of the original description. The type station, Napa Springs, California, is some 75 miles north of San Francisco, on the foot-hills of the Coast Range, in Tertiary formation, at an elevation of less than a thousand feet, probably.

Grimmia Holzingeri occurs on Archaean rocks, in the heart of the Rockies, at an altitude of 7000-8000 feet, in sight of slowly expiring glaciers, once mighty streams of ice, associated with European alpine species, fully 700 miles to the northeast of the other plant, and the Bitter Root mountains, the barren plateau region including the Snake river plains of Idaho, the Great Basin of Utah and Nevada, and the Sierra Nevada range of California lie between the stations. Nevertheless, the two plants in gross appearance, in size, texture and color, looks exactly alike. And Dr. Kindberg may be right. Unfortunately, *G. Holzingeri* was found in the sterile state only. The comparison which the writer was able to make with two sterile plants of type material of *G. Manniae* kindly communicated by Dr. Kindberg, resulted in discovering apparent discrepancies in size and areolation of leaves. But since the original description of *G. Manniae* has become available to the writer, the idea has gained ground that the comparison of the two plants, which at first seemed to cast doubt upon Dr. Kindberg's suggestion, may, by accident, have been between perichaetial leaves of one plant and ordinary stems leaves of the other! And, in spite of the considerable difference in altitude at which the plants occur, they may prove identical. Further and more conclusive investigation is necessary to establish this identity beyond doubt, and the writer would consider it a favor if any moss students who read the BRYOLOGIST, and have found *Grimmia Manniae*, either near Napa Springs, California, or at points intermediate between this type station and that of *Grimmia Holzingeri*, namely, the region north of Lake McDonald, northwest Montana, would enter into correspondence with him, with a view fully to clear up the present doubt. Meanwhile, the difference in altitude, in geological horizon, and the great distance between the two type stations, are serious obstacles in the way of reducing *Grimmia Holzingeri*.

And, whereas in the cases of unusual plant distribution noticed by the writer, a plausible explanation has always been found by reference to the phenomena of the great ice cap over the Northern Hemisphere, and the earlier and recent proximity of the Old and New World continents in the far north, no such explanation presents itself to clear up this case, should the two plants finally be proved identical.

WEBERA PROLIGERA (Lindb.) Kindb. IN NORTH AMERICA.

This European moss, which ranges from the Alps to Scandinavia, was collected by the writer some three years ago in the upper Mississippi valley, but was only recently doubtfully referred to this species. Though the plant is more robust, and has its peculiar "gemmae" *yellowish* instead of *greenish*, as in the Old World plant, it seems best to adhere to the present determination. Mr. Nicholson, Dr. Bryhn, and Dr. I Hagen, write that forms as robust as this occur in Europe: and, together with such careful workers as Dr. G. N. Best and M. Jules Cardot, they agree that this determination is right. It was Dr. Best who first called attention to the agreement between the figures in Correns' article on Brutkoerper and the "propagula" on this moss. It is interesting to note that both this plant and *Grimmia teretinervis* were also collected by Breidler in Steiermark.—*John M. Holzinger.*

A NEW HYPNUM FROM MONTANA.

Recently the writer distributed his northwest Montana mosses, collected near Lake McDonald in 1898. Among these was a *Hypnum* which Dr. Best kindly determined for me as *Hypnum turgescens* Sch. The plant is indeed the same as Can. Musc. 483, determined by Dr. Kindberg. Within a few weeks word came from three prominent European moss students, indicating that each recognized in this a new species, distinct from *H. turgescens*. Two of these gentlemen agree in referring it to *Limnobium*, one nearest to *H. molle*, the other nearest to *H. dilatatum*. To avoid further attempts at describing this moss, the writer feels constrained to publish this note.

The plant is distinct from its near relatives by the larger size of all its parts, and by the different shape of its leaves. Leaves broadest below the first quarter, distinctly decurrent, lurid or olivaceous green, distant, and very widely spreading, the areolation more loose, and formed by longer cells. The plant must be called **Hypnum (Limnobium) Bestii** Ren. & Bryhn.

In the next BRYOLOGIST will appear a more detailed description, some figures, and explanations that will do justice to all concerned. Dr. Best writes that *Limnobium* is antedated by a genus of flowering plants, and that Braithwaith uses *Hygrohypnum* in its stead. So this moss may have to be called *Hygrohypnum Bestii* Ren. & Bryhn.—*John M. Holzinger.*